

WHAT IS CLAIMED IS:

1. A connector assembly suitable for connecting a plurality of signals to a data processing system, comprising:

a receptacle configured to attach to an adapter card of the data processing system wherein a longitudinal axis of a receptacle housing extends perpendicularly to a plane defined by the adapter card, the receptacle including a set of contact structures oriented along the longitudinal axis perpendicularly to the adapter card;

a probe including a plurality of contact areas arranged to align with the receptacle contacts structures when the probe is received within the receptacle;

wherein the receptacle contact structures are further configured to connect to corresponding signals and the probe contacts are configured to connect to corresponding interconnects such that the signals are connected to their corresponding interconnects when the probe is received within the receptacle.

2. The apparatus of claim 1, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact structures extend from an exterior surface of the probe.

3. The apparatus of claim 1, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle.

4. The apparatus of claim 1, wherein the receptacle further comprises an iris configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

5. The apparatus of claim 4, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

5

6. The apparatus of claim 1, wherein the probe includes a probe cover sized to be received within the receptacle and a probe body including the probe contacts and wherein the probe body is rotatable within the probe cover from a first position in which the probe cover prevents contact to the probe contacts to a second position in which at least one gap defined by the probe cover is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contacts.

10

7. The apparatus of claim 6, wherein the probe includes a locking portion the defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

15

8. The apparatus of claim 7, wherein the channel enables a turn of the probe body sufficient to align the probe body contacts with the receptacle contact structures.

20

9. The apparatus of claim 6, wherein the probe body defines at least one notch configured to mate with the receptacle contacts

10. The apparatus of claim 6, wherein each probe contact is connected to a corresponding interconnect running through an interior of the probe body.

25

11. A data processing system including processor, memory, and input means connected via at least one bus, the system further including an adapter card connected to the bus and a connector assembly connected to the adapter, the connection comprising:

5 a receptacle configured to attach to an adapter card of the data processing system wherein a longitudinal axis of a receptacle housing extends perpendicularly to a plane defined by the adapter card, the receptacle including a set of contact structures oriented along the longitudinal axis;

10 a probe including a plurality of contact areas arranged to align with the receptacle contacts structures when the probe is received within the receptacle;

15 wherein the receptacle contact structures are further configured to connect to corresponding signals and the probe contacts are configured to connect to corresponding interconnects such that the signals are connected to their corresponding interconnects when the probe is received within the receptacle.

20 12. The system of claim 11, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact structures extend from an exterior surface of the probe.

25 13. The system of claim 11, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle.

30 14. The system of claim 11, wherein the receptacle further comprises an iris configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

15. The system of claim 14, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

5

16. The system of claim 1, wherein the probe includes a probe cover sized to be received within the receptacle and a probe body including the probe contacts and wherein the probe body is rotatable within the probe cover from a first position in which the probe cover prevents contact to the probe contacts to a second position in which at least one gap defined by the probe cover is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contacts.

10

17. The system of claim 16, wherein the probe includes a locking portion the defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

15

18. The system of claim 17, wherein the channel enables a turn of the probe body sufficient to align the probe body contacts with the receptacle contact structures.

20

19. The system of claim 16, wherein the probe body defines at least one notch configured to mate with the receptacle contacts

20. The system of claim 16, wherein each probe contact is connected to a corresponding interconnect running through an interior of the probe body.

25

21. An adapter card suitable for use with a data processing system including a connector assembly connected to the adapter, the connector assembly comprising:

5 a receptacle configured to attach to an adapter card of the data processing system wherein a longitudinal axis of a receptacle housing extends perpendicularly to a plane defined by the adapter card, the receptacle including a set of contact structures oriented along the longitudinal axis;

10 a probe including a plurality of contact areas arranged to align with the receptacle contacts structures when the probe is received within the receptacle;

15 wherein the receptacle contact structures are further configured to connect to corresponding signals and the probe contacts are configured to connect to corresponding interconnects such that the signals are connected to their corresponding interconnects when the probe is received within the receptacle.

20 22. The system of claim 21, wherein the receptacle contact structures extend within an interior surface of the receptacle housing and the probe contact structures extend from an exterior surface of the probe.

25 23. The system of claim 21, the receptacle further includes at least one probe guide extending from an interior surface of the receptacle housing and wherein an exterior surface of the probe defines at least one notch configured to receive the probe guide when the probe is inserted into the receptacle.

30 24. The system of claim 21, wherein the receptacle further comprises an iris configured to transition from a closed position in which the iris covers an interior of the receptacle to a retracted position enabling insertion of the probe into the receptacle interior.

25. The system of claim 24, wherein the iris includes at least one tab arranged to engage a corresponding notched element of the probe and wherein the iris is configured to retract by engaging the probe notched element with the corresponding tab and rotating the probe relative to the receptacle.

5

26. The system of claim 1, wherein the probe includes a probe cover sized to be received within the receptacle and a probe body including the probe contacts and wherein the probe body is rotatable within the probe cover from a first position in which the probe cover prevents contact to the probe contacts to a second position in which at least one gap defined by the probe cover is aligned with at least one of the probe contacts thereby enabling the receptacle contact structures to contact the probe contacts.

10

27. The system of claim 26, wherein the probe includes a locking portion the defines a channel configured to receive a locking pin positioned on an exterior surface of a locking portion of the receptacle.

15

28. The system of claim 27, wherein the channel enables a turn of the probe body sufficient to align the probe body contacts with the receptacle contact structures.

20

29. The system of claim 26, wherein the probe body defines at least one notch configured to mate with the receptacle contacts

30. The system of claim 26, wherein each probe contact is connected to a corresponding interconnect running through an interior of the probe body.

25